

bibliographers as an independent book. The localities for the illustrations are not given, and as they are not numbered they are not referred to specifically in the text.

Worcester County is the largest in the state (1,565 square miles), and the field work occupied the author and nine students three summers. Each man took one town at a time and ran parallel lines across it half a mile apart, noting the extent of cleared land and each kind of forest traversed, and putting the results on a field map. The forests are divided into seven types and each of those into four size classes.

Of the total area of the county (which had 256 inhabitants per square mile in 1910) 57 per cent was found to be wooded, 21 per cent tilled, 10 per cent open pasture, 5 per cent brush pasture, and the remainder alder swamps, water, settlements, etc. For each town similar data are given, together with notes on wood-using industries, averaging about a page each. Nearly a third of the forest is a comparatively worthless second growth of gray birch, sugar-maple, swamp maple, and an occasional oak. In the better forests white pine and chestnut seem to be the prevailing trees, the former mostly northward and the latter southward.

If the field workers had classified the standing timber by species, which are pretty sharply defined, instead of by forest types, which often grade imperceptibly into one another, it might have added very little to the cost of the survey, and the results would have been more useful, not only to manufacturers who might desire a particular kind of timber for a special purpose, but also to botanists and other scientists.

ROLAND M. HARPER

Forests of Maryland*

The author, who is the state forester, sums up in this neat quarto volume the results of seven or eight years' work. He had contributed a chapter on forests to the "Plant Life of Maryland," published by the Maryland Weather Service in 1910,†

* Besley, F. W. The forests of Maryland. 152 pp., 17 plates, 23 folded colored maps. Baltimore, "December, 1916." [Published in summer of 1917.] (Previously reviewed by Dr. Fernow in *Journal of Forestry* 16: 113-115. "Jan." [Feb.] 1918.)

† Reviewed in *Torreya* 11: 36-42. Feb. 1911.

and before that the Maryland Geological Survey had published voluminous reports on the forests of a few counties; but the present publication covers the whole state in a very satisfactory manner, with the thoroughness that has long characterized official scientific work in Maryland. It discusses the history of forest exploitation, present conditions in general and by counties, the species of trees, the principal uses of the forest, the wood-using industries of the state, and various other matters appropriate to an economic report.

For each county the total and relative area of forest, improved land, waste land and salt marsh are given, and the forests are further subdivided into mixed hardwoods, pine, and pine and hardwood, each in two degrees of density. There are somewhat similar details also for each of the election districts, averaging about twelve to a county.* The maps, one for each county (one of them covering also the city of Baltimore, which is not a part of any county, and another the District of Columbia), on a scale of three miles to the inch, show the location of all the forests more than a few dozen acres in extent, divided into several types and density classes by means of colors and symbols. It was obviously out of the question to cover the whole state in a single year, and some of the counties were surveyed as long ago as 1907; but the boundaries of wooded areas in Maryland are not changing very fast, so that these maps apply without appreciable error to present conditions. The 30 half-tone illustrations are well chosen, but in most cases the places where the photographs were taken are not indicated, except inferentially by the location of some of the plates among the county descriptions.

Of the total area of the state (which had 130 inhabitants per square mile in 1910) 35 per cent is estimated as forest, 51 per cent as improved farm land, 11 per cent waste land, and 3 per cent marsh. Of the forest 65 per cent is classed as hardwood, 15 per

* The election districts used in the tables (but not shown on the maps) seem to be those outlined on the large county topographic maps published by the state geological survey several years ago; but some additional districts were carved out even before the U. S. census of 1910, so that the forest statistics cannot be completely correlated in these minor details with the population figures of the census.

cent pine, and 20 per cent hardwood and pine mixed. No allowance seems to be made for mountain glades, rocky pastures and urban areas in the land classification, or for conifers other than pine in the forest classification, but the areas occupied by these probably do not much exceed 1 per cent of the total.

The relative amount of forest ranges from 63 per cent in Garrett County, which is the westernmost, highest and rockiest, to 19 per cent in Kent, which is in the fertile green sand marl belt near the head of Chesapeake Bay. Dorchester County is 21 per cent salt marsh, and the area of marsh is said to be increasing, presumably indicating subsidence. If we assume that half the mixed pine and hardwood forest is pine, the proportion of pine in the forests ranges from almost none in some of the Piedmont counties (which have the richest soils), to about two thirds in the three southeasternmost counties (which are rather sandy). The total stand of saw timber (9 inches and over in diameter) in the state is estimated at nearly 4 billion feet, board measure, or about 1,800 feet per acre; and it is apparently being cut faster than it grows.

This report answers almost every question one might reasonably ask about the forest resources of Maryland, except the amount of *any one kind* of timber (for there are many species of hardwood and several of pine, differing considerably in economic properties) in the state or any part thereof. As the work is statistical rather than scientific, it contains very little information about previous literature, geography, soil, climate, etc., but those matters are pretty well covered by other state publications, and this one will be a great help to any one who may hereafter wish to classify the forests by regions and determine the relative abundance of the several species of trees and correlate them with environmental factors.

ROLAND M. HARPER

Murrill's and Saccardo's Names of Polypores Compared*

The object of this pamphlet, as stated by the author, is to provide parallel lists of synonyms, so that one may readily find the

* By W. A. Murrill, Bronxwood Park, New York City. Pp. 1-31. Published by the author, March, 1918. Price \$0.35.